S/M No : DSA241L001

Service Manual

Split System

Air Conditioner

Model: DSA-241L

✔ **Caution**

: In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center.

DAEWOO ELECTRONICS

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1.Features

1.1 Compact design

1.2 LED display

2.Specification

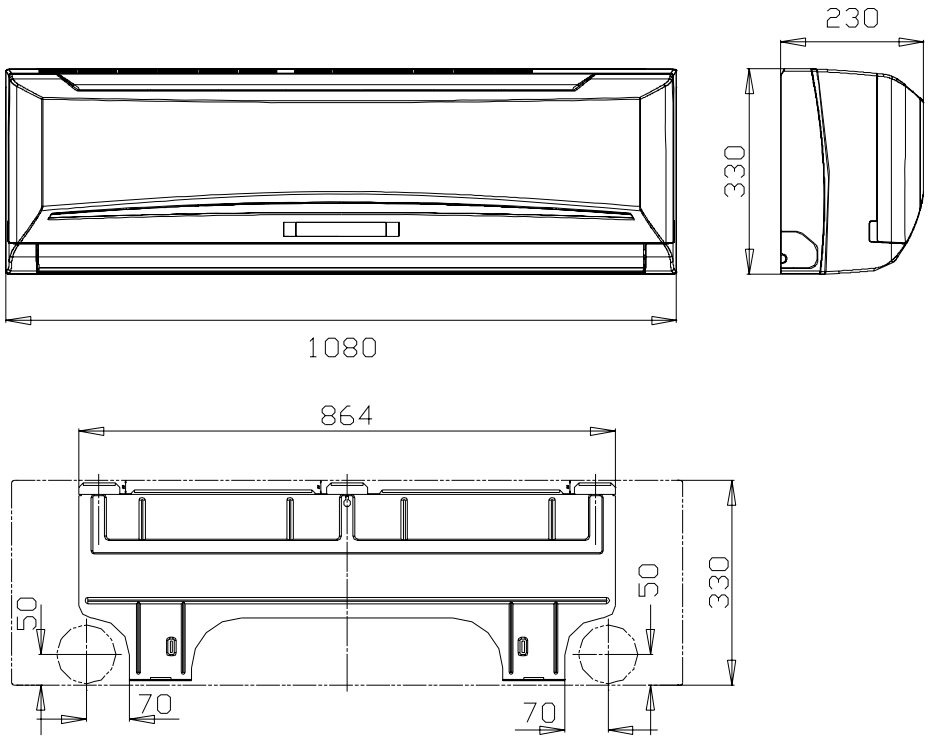
Model			DSA-241L
Power supply		Ph-V-Hz	220-230V~,60HZ
Cooling	Capacity	Btu/h	24000
	Input	W	2670
	Rated current	A	12.1
	EER	Btu/w.h, W/W	9.0,2.6
Heating	Capacity	Btu/h	
	Input	W	
	Rated current	A	
	COP	W/W	
Moisture Removal		L/h	2.4
Max. input consumption		W	3200
Max. current			16
Starting current			54
Compressor	Model		PH360X3CS-3KUU1
	Type		Rotary
	Brand		TOSHIBA
	Capacity	Btu/h	24990
	Input	W	2430
	Rated current(RLA)	A	11.3
	Locked rotor Amp(LRA)	A	61/66
	Thermal protector		P14RE5245 (Interna)
	Capacitor	uF	50
	Refrigerant oil	ml	SUNISO 4GSD 950
Indoor fan motor	Model		YDK36-4C
	Brand		Welling
	Input	W	150
	Capacitor	uF	2μF/450V
	Speed(hi/mi/lo)	r/min	1200/1120/1080/1000
Indoor air flow (Hi/Mi/Lo)		m3/h	1080/1020/960/880
Indoor noise level (Hi/Mi/Lo)		dB(A)	48/45/42
Indoor unit	Dimension (W*H*D)	mm	1080X330X225
	Packing (W*H*D)	mm	1165X445X320
	Net/Gross weight	Kg	17/21
Outdoor fan moto	Model		YDK53-6D
	Brand		Welling
	Input	W	150
	Capacitor	uF	3
	Speed	r/min	800
Outdoor air flow		m3/h	2500
Outdoor noise level		dB(A)	≤ 58
Outdoor unit	Dimension(W*H*D)	mm	845X695X335
	Packing (W*H*D)	mm	970X770X395
	Net/Gross weight	Kg	56/60
Refrigerant type		g	R22 / 1450
Design pressure		MPa	2.6
Refrigerant piping	Liquid side/ Gas side	mm(inch)	ø 9.53/ ø16.0
	Max. refrigerant pipe len	m	20
	Max. difference in level	m	10
Connection wiring			No
Plug type			No
Thermostat type			Electronic control
Operation temp		°C	17-30
Ambient temp		°C	18-45
Application area		m2	40~56
Qtyíper 20' /40' /40'HQ		set	60/132/142

1 The noise date is base on hemi-anechoic chamber, during actual operation, these values are normally somewhat different as a result of ambient condition.

3.Dimensions

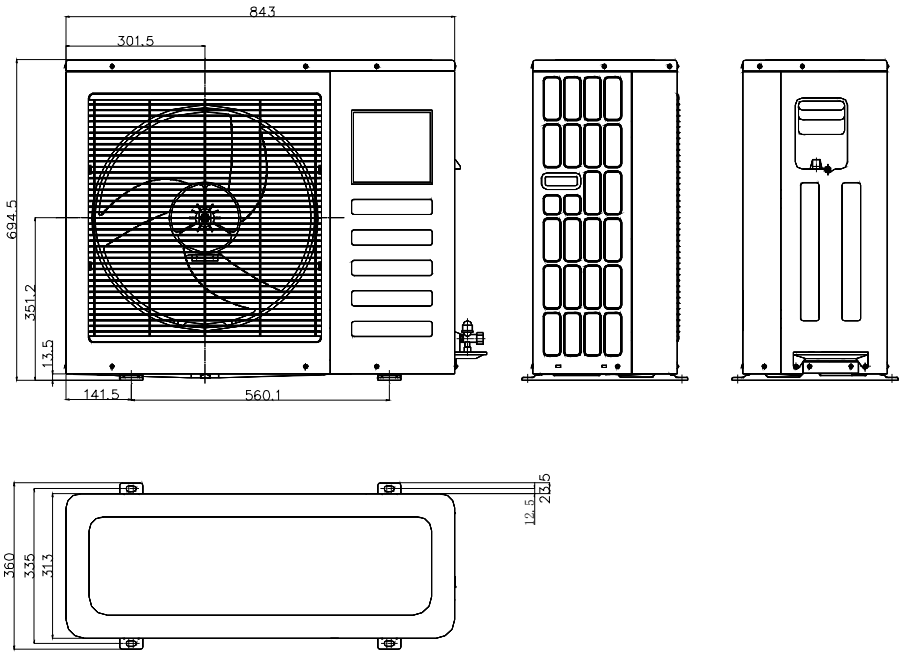
3.1 Indoor unit

DSA-241L

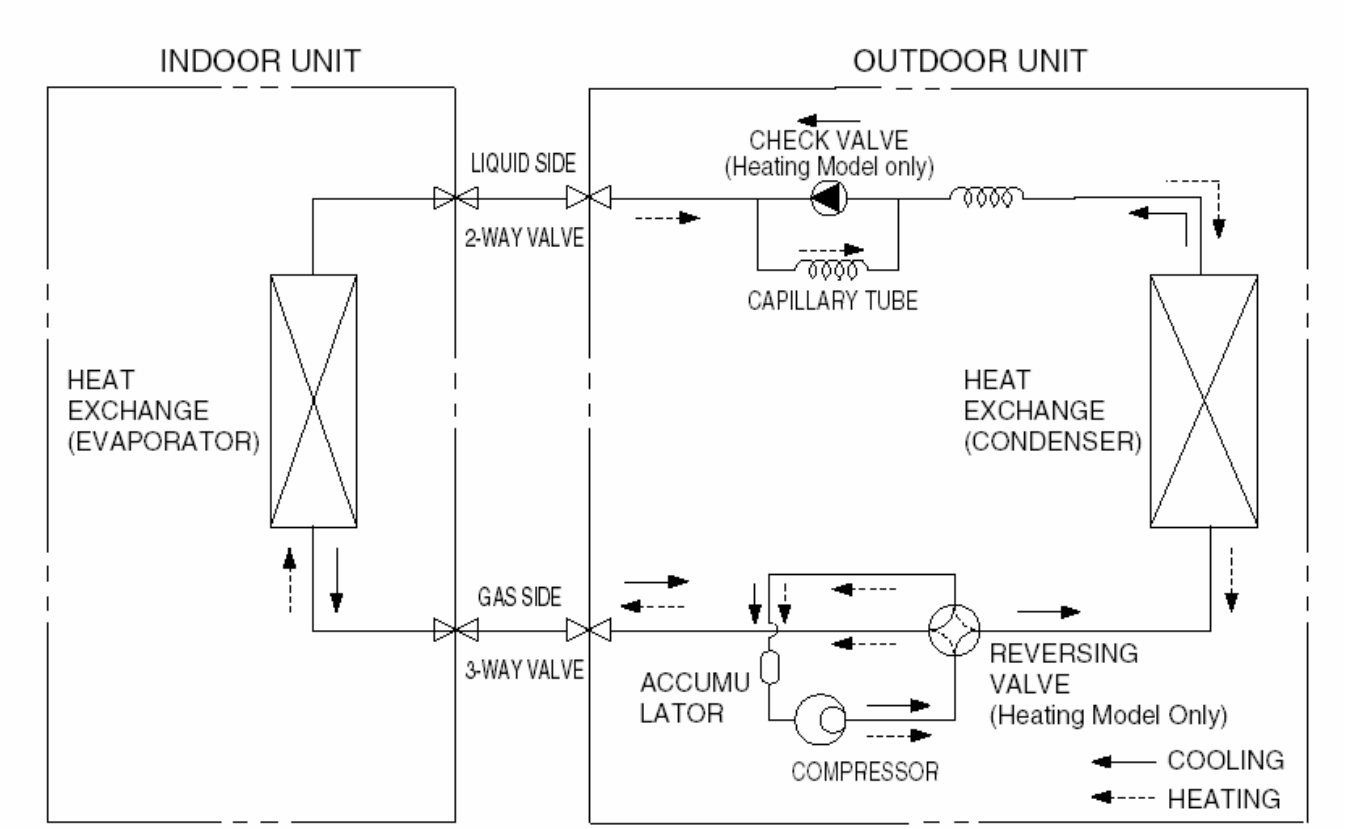


3.2 Outdoor unit

DSA-241L



4.Refrigeration cycle diagram



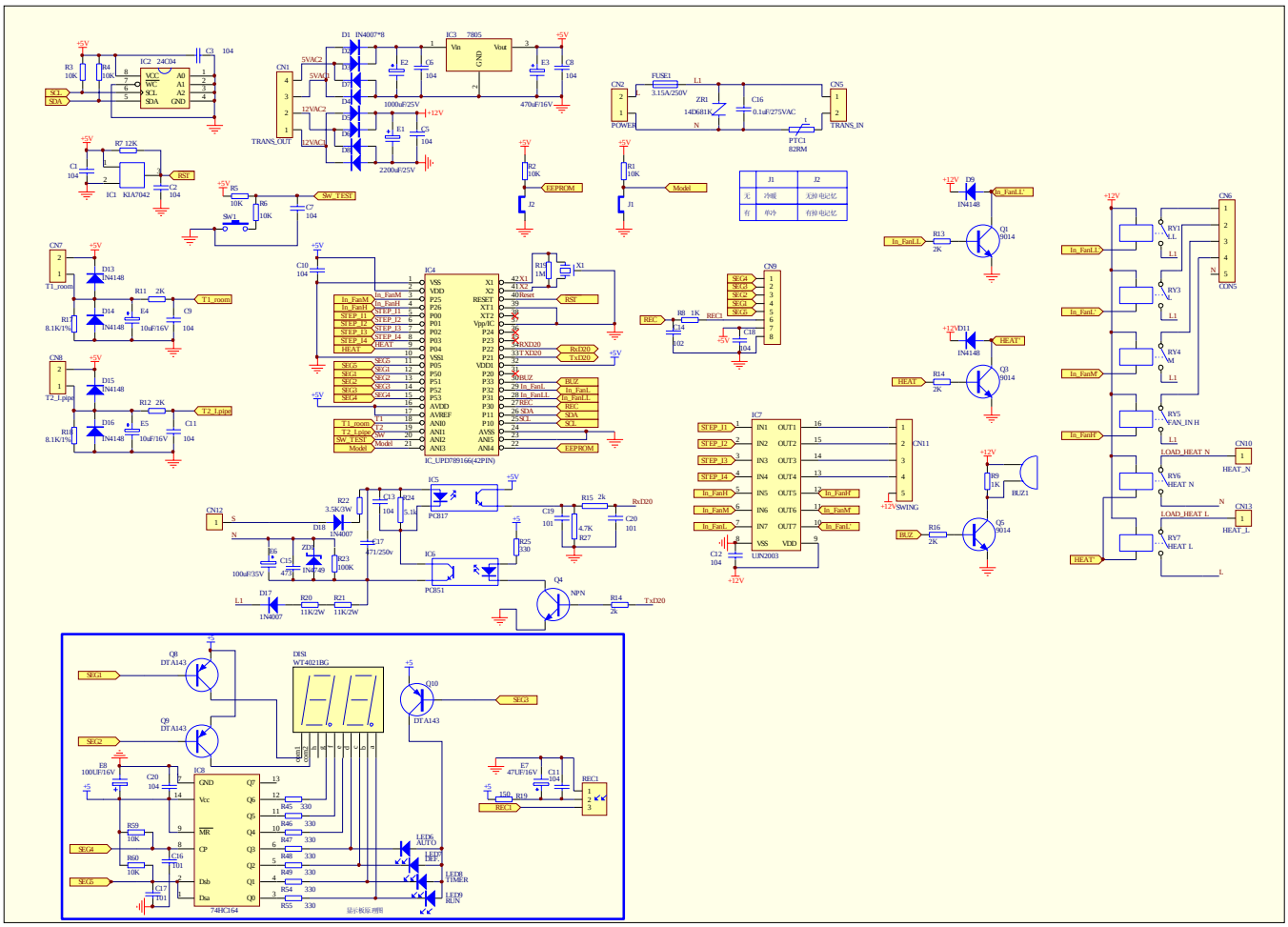
5. Capacity table

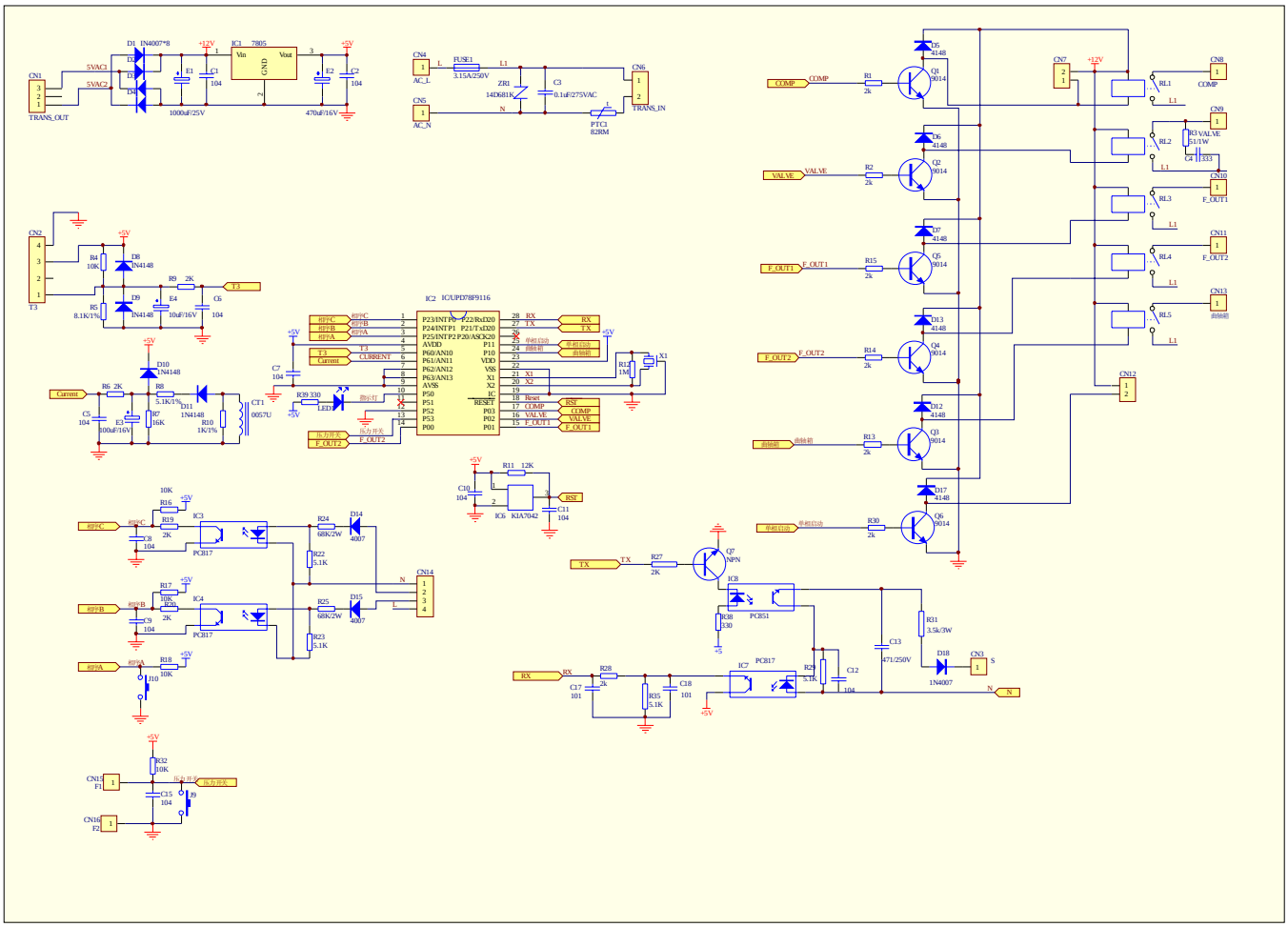
5.1 DSA-241L

SUMMER		OUTDOOR TEMPERATURE DRY					
Indoor Conditions		**25ºC**	**30ºC**	**35ºC**	**40ºC**	**45ºC**	**50ºC**
21ºC D 15ºC W	Total capacity kW	6.57	6.25	5.81	5.34	4.90	4.57
	Sensitive capacity kW	4.61	4.47	4.28	4.06	3.85	3.69
	Input kW.	2.30	2.50	2.71	2.95	3.13	3.35
24ºC D 17ºC W	Total capacity kW	7.04	6.73	6.35	5.94	5.55	5.22
	Sensitive capacity kW	4.89	4.75	4.58	4.41	4.28	4.23
	Input kW.	2.30	2.52	2.75	2.98	3.21	3.44
27ºC D 19ºC W	Total capacity kW	7.54	7.40	**7.00**	6.45	5.87	5.37
	Sensitive capacity kW	5.30	5.19	**5.12**	4.75	4.51	4.30
	Input kW.	2.34	2.58	**2.80**	3.05	3.29	3.52
32ºC D 23ºC W	Total capacity kW	7.98	7.80	7.69	7.42	7.08	6.73
	Sensitive capacity kW	5.24	5.09	5.04	4.96	4.90	4.92
	Input kW.	2.41	2.59	2.87	3.15	3.42	3.70

6. Schematic diagram and wiring diagram

6.1 Schematic diagram

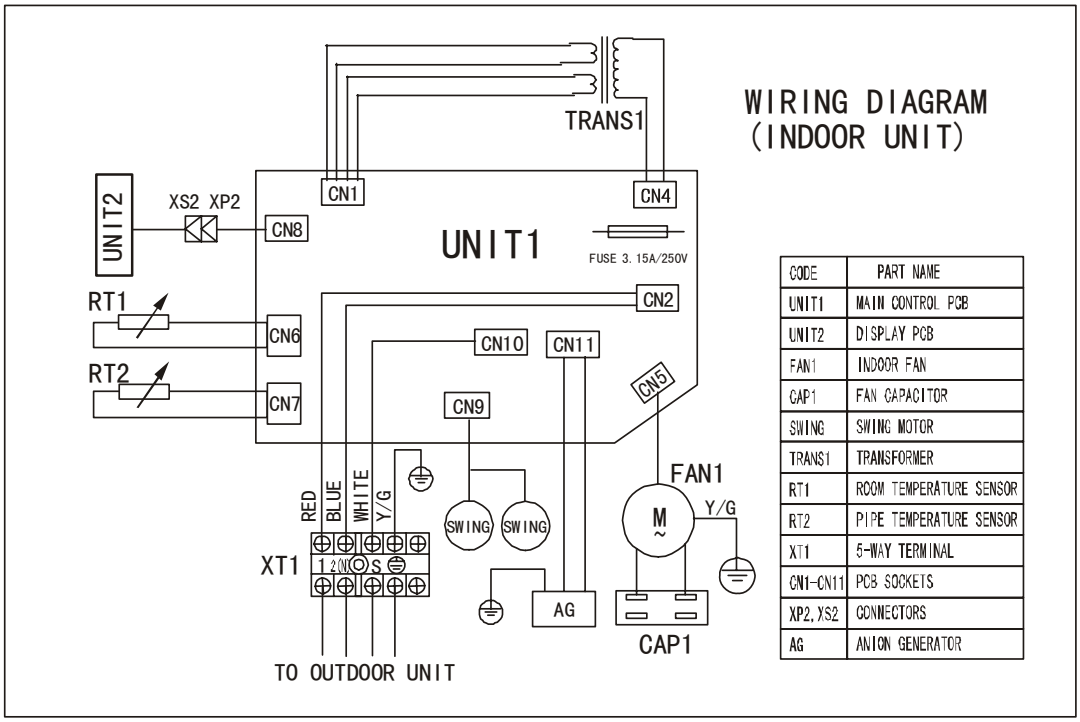


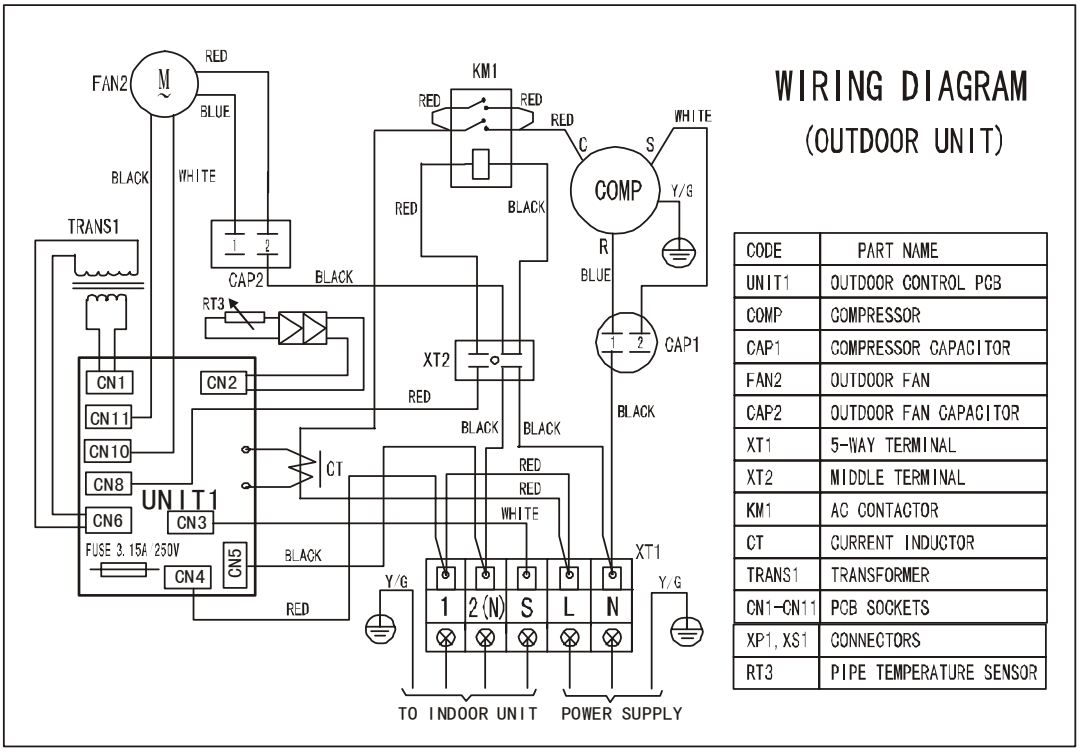


6.2 Wiring diagram

6.2.1 Cooling only

DSA-241L





7.troubleshooting

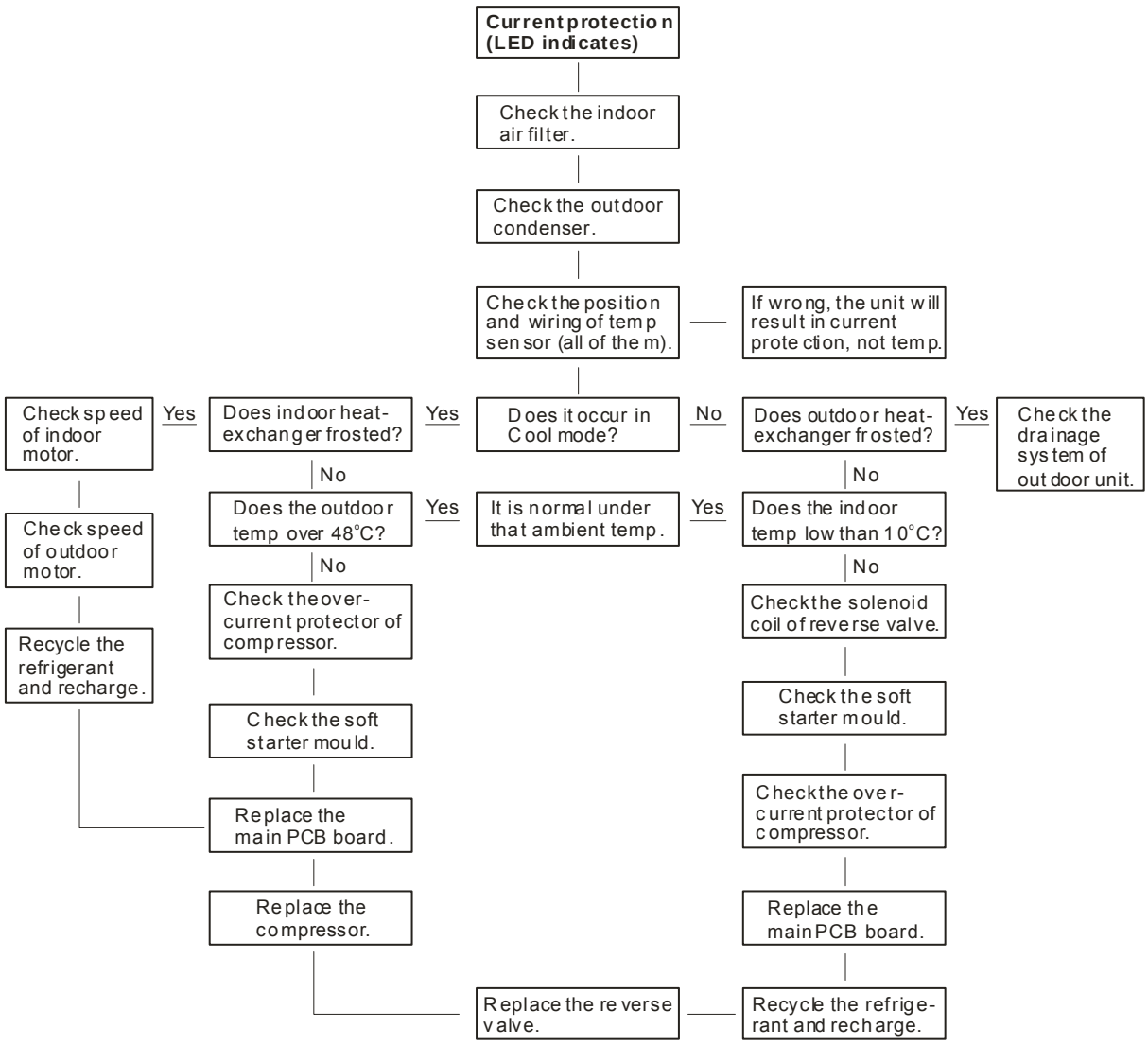
The following tables will help to find where error happened (LED on indoor unit):

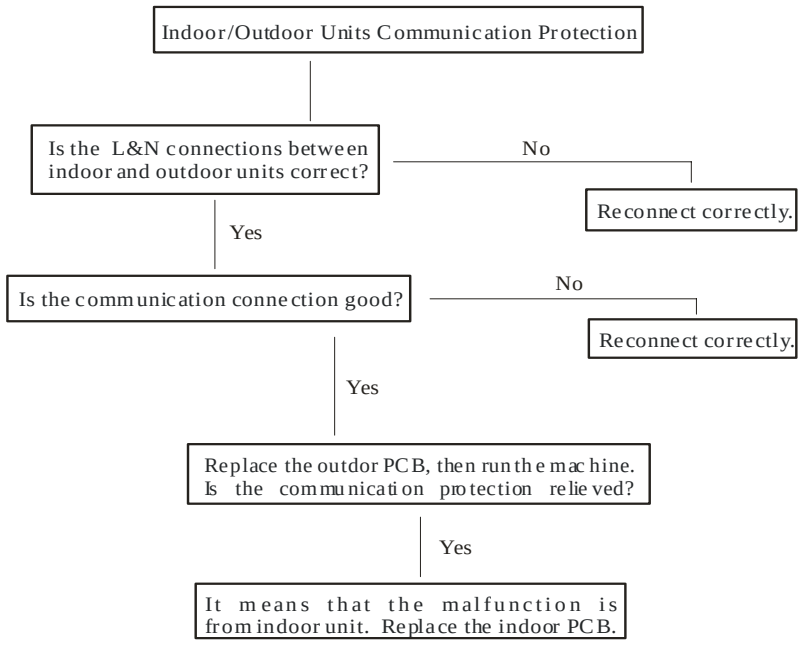
For models adopting electrical function

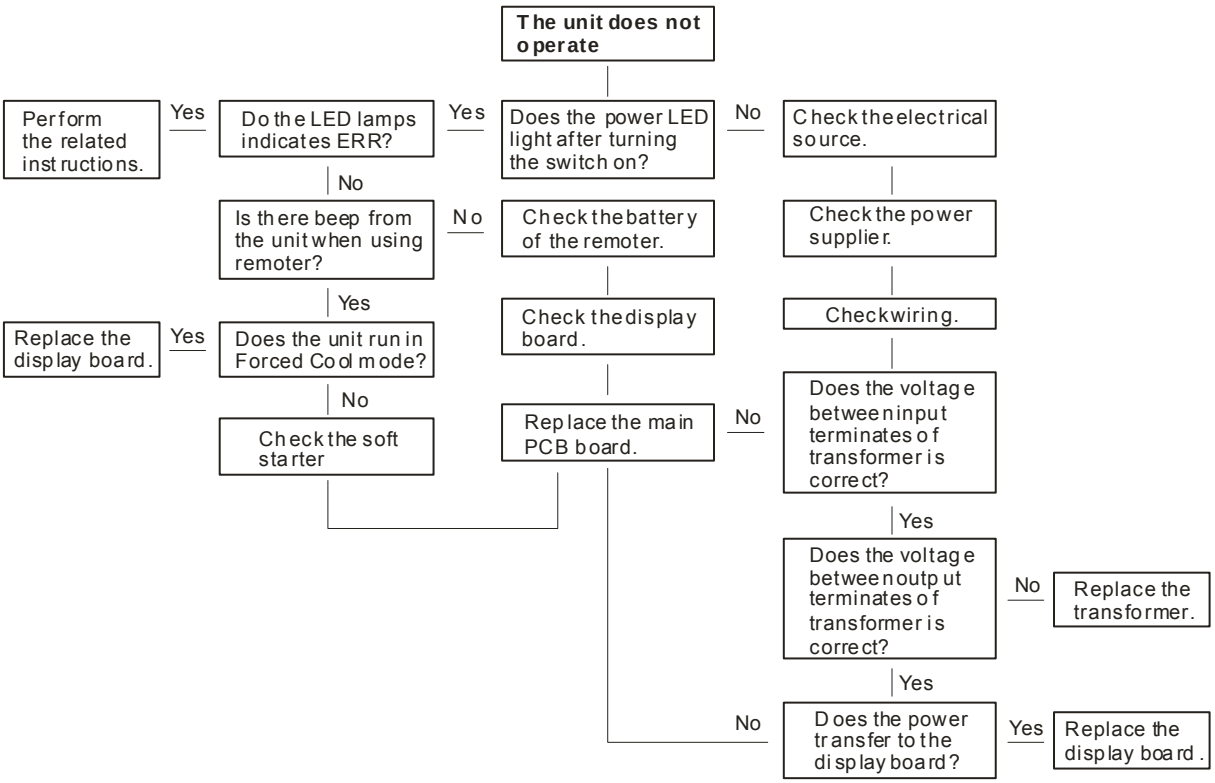
Failure phenomenon	Operation lamp	Timer lamp	Defrosting lamp	Auto lamp
Over current protection of the compressor occurs 4 times	☆	☆	☆	☆
Indoor room temp. sensor is open circuit or short circuit	X	☆	X	X
Temp. sensor on indoor evaporator is open circuit or short circuit	☆	X	X	X
Temp. sensor on outdoor condenser is open circuit or short circuit (without for cooling only models)	X	X	☆	X
Outdoor unit protects(outdoor temp sensor, phase order etc)	X	X	☆	☆
EEROM error	X	☆	X	☆
Indoor unit communication err	X	X	X	☆

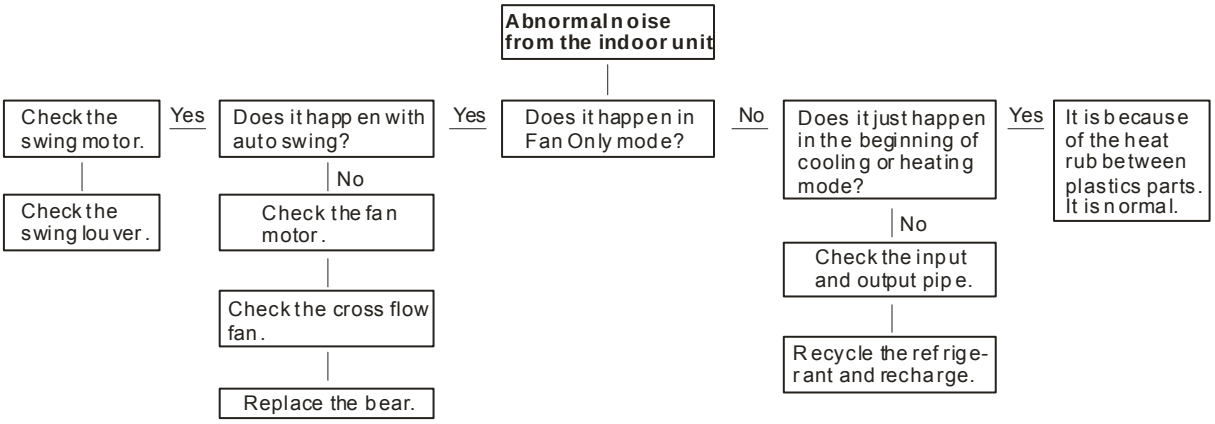
✕ Extinguish ☆ Flash at 5Hz

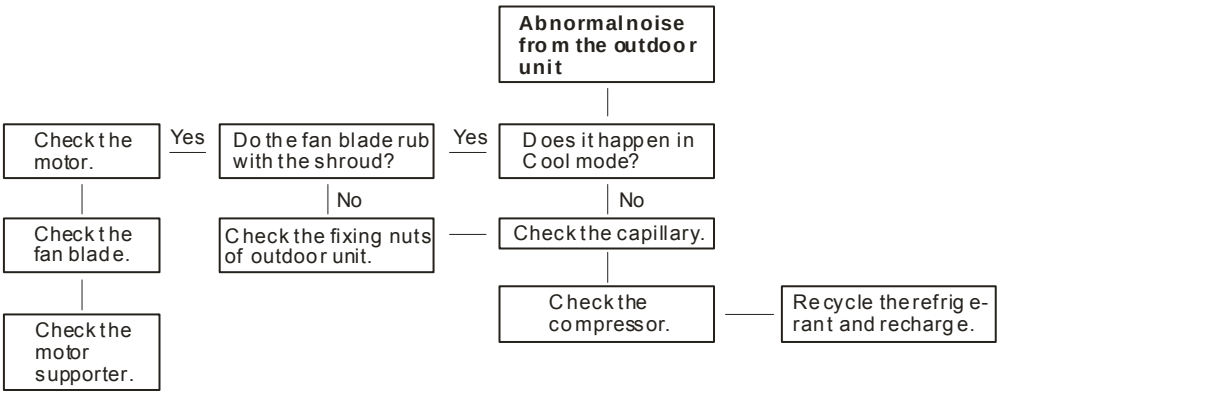
NOTE: For cool only model, the defrosting lamp is replaced with fan lamp, but malfunction display remains.


Current protection (LED indicates)
Check the indoor air filter.
Check the outdoor condenser.
Check the position and wiring of temp sensor (all of them).
If wrong, the unit will result in current protection, not temp.
Does it occur in Cool mode?
No
Yes
Does indoor heat-exchanger frosted?
Yes
No
Check speed of indoor motor.
Yes
Check speed of outdoor motor.
Recycle the refrigerant and recharge.
Does the outdoor temp over 48°C?
Yes
No
Check the over-current protector of compressor.
Check the soft starter mould.
Replace the main PCB board.
Replace the compressor.
It is normal under that ambient temp.
Yes
Replace the reverse valve.
Does outdoor heat-exchanger frosted?
Yes
No
Check the drainage system of out door unit.
Does the indoor temp low than 10°C?
No
Check the solenoid coil of reverse valve.
Check the soft starter mould.
Check the over-current protector of compressor.
Replace the main PCB board.
Recycle the refrige-rant and recharge.


Indoor/Outdoor Units Communication Protection
Is the L&N connections between indoor and outdoor units correct?
No
Reconnect correctly.
Yes
Is the communication connection good?
No
Reconnect correctly.
Yes
Replace the outdor PCB, then run the machine. Is the communication protection relieved?
Yes
It means that the malfunction is from indoor unit. Replace the indoor PCB.


The unit does not operate
Does the power LED light after turning the switch on?
No
Check the electrical source.
Check the power supplier.
Check wiring.
Does the voltage between input terminates of transformer is correct?
Yes
Does the voltage between output terminates of transformer is correct?
No
Replace the transformer.
Yes
Does the power transfer to the display board?
Yes
Replace the display board.
No
Replace the main PCB board.
No
Check the battery of the remoter.
Check the display board.
Do the LED lamps indicates ERR?
Yes
Perform the related instructions.
Is there beep from the unit when using remoter?
No
Yes
Does the unit run in Forced Cool mode?
Yes
Replace the display board.
No
Check the soft starter


Abnormal noise from the indoor unit
Does it happen in Fan Only mode?
No
Does it just happen in the beginning of cooling or heating mode?
Yes
It is because of the heat rub between plastics parts. It is normal.
No
Check the input and output pipe.
Recycle the refrigerant and recharge.
Yes
Does it happen with auto swing?
Yes
Check the swing motor.
Check the swing louver.
No
Check the fan motor.
Check the cross flow fan.
Replace the bear.


Abnormal noise from the outdoor unit
Does it happen in Cool mode?
No
Check the capillary.
Check the compressor.
Recycle the refrigerant and recharge.
Yes
Do the fan blade rub with the shroud?
Yes
Check the fixing nuts of outdoor unit.
No
Check the motor.
Check the fan blade.
Check the motor supporter.

PROBLEM	CAUSE	REMEDY
Not operating	Power failure	Check the power cord.
	Wiring failure	Check the wiring. Replace the terminates or wires if failure.
	Transformer failure	Check the input and the output on transformer. Replace if failure.
	Indoor PCB failure	Replace after checked failure.
Indoor abnormal noise.	Cross flow fan failure	Replace the fan if cracked, out of balance, or partially missing.
	Loose screws	Tighten them.
	Worn bearings	Replace after checked failure.
	Motor failure	Replace the motor if knocking sounds continue when running or loose, or the motor hums or noise appears to be internal while running.
Outdoor abnormal noise.	Fan blade failure	Replace the fan blade if cracked, out of balance, or partially missing.
	Loose screws	Tighten them.
	Motor failure	Replace the motor if knocking sounds continue when running or loose, or the motor hums or noise appears to be internal while running.
	Compressor failure	Replace the compressor if sounds coming from inner of the compressor.
	Copper tubing	Remove the cabinet and carefully rearrange tubing not to contact cabinet, compressor.
Remote control failure.	Display board or indoor PCB failure	Replace the display board. If it is still false, replace the PCB.
	Battery failure	Check the voltage of battery. Replace batteries if the voltage is lower than 2.3V.
	Remote control failure	Normally, the remote control is not easy to damage. If the above two methods are not effectual, replace the remote control.
Compressor protection	Lack of refrigerant	Check leakage. Recycle the refrigerant. Correct and recharge if there is any leakage in the refrigerant system.
	Soft starter module failure	Check the module and the capacitor connected to the module. Replace if failure.
	Overcurrent protector failure	Check the resistance of compressor overcurrent protector. Replace if failure.
	Outdoor PCB failure	Replace after checked failure.

PROBLEM	CAUSE	REMEDY
Open or short circuit of outdoor temperature sensor	Temperature sensor failure	Replace after checked failure.
	Connector failure or loose	Repair or replace the sensor.
	Outdoor PCB failure	Replace after checked failure.
Room temp or evap temp sensor open or short circuit	Temperature sensor failure	Replace after checked failure.
	Connector failure or loose	Repair or replace the sensor.
	Indoor PCB failure	Replace after checked failure.
Over load or too low voltage protection	Soft starter module failure	Check the module and the capacitor connected to the module. Replace if failure.
	Power failure	Wait if checked the power voltage is really too low.
Fan speed beyond control	Wiring failure	Correct if indoor fan motor wiring is loose.
	Indoor fan motor failure	Check the input of fan motor. Replace if failure.
	Indoor PCB failure	Replace after checked failure.
Zero-crossing error	Indoor PCB failure	Replace after checked failure.
Insufficient cooling or heating.	Air filter	Clean or replace if restricted.
	Unit undersized	Determine if the unit is properly sized for the area to be cooled or heated.
	Condenser and Evaporator	Clean or replace if restricted.
	Room structure	Take proper measures to make the door and windows sealed well if gap is found.
	Air flow	Clean or remove if any barrier is found to block the inlet/outlet wind flow of the unit.
	Sunlight	Add a awning if the outdoor unit is exposed to the sunlight.
	Outdoor fan motor	Check the fan capacitor on outdoor power control board and replace the board if not within +/-10% of manufacturer's rating. Replace the motor if the speed is not within +/-10% of manufacturer's rating but not because of the capacitor.
	indoor fan motor	For electrical function 2.3 models. Check the fan capacitor in indoor electric box (for some models, the capacitor is on main PCB.) and replace the capacitor (or main PCB) if not within +/-10% of manufacturer's rating. Replace the motor if the speed is not within +/-10% of manufacturer's rating but not because of the capacitor.
	Less refrigerant	Check the tubes for reasons of leakage. Recycle the refrigerant, correct the leakage points and recharge.
	Capillary tube	Regulate the flow if capillary tube is blocked. Make the evaporating temperature appropriate if the evaporator is frosted.
	Compressor	The inlet and outlet valve of the compressor is damaged, making the low pressure connected with the high pressure. The refrigerating system is difficult to produce high pressure and low pressure. Replace the compressor after checking for the reason.
	Heat sources	Reduce if over loaded.
	reverse valve	The two paths for refrigerant are connected, making the low pressure connected with the high pressure. The refrigerating system is difficult to produce high pressure and low pressure. Replace the reverse valve after checking for the reason.

PROBLEM	CAUSE	REMEDY
No display on indoor unit.	LED failure	Replace the display if checked failure.
	Remote control shut the display	Push the button to turn the display on.
No cooling or heating.	No power	Check the voltage. Call an electrician if not within the limit.
	Wiring	Check the terminals. Repair and correct if loose.
	Temperature setting	Check and adjust the temperature setting.
	Mode setting	Check and adjust the mode setting.
	Soft starter module failure	Check the module and the capacitor connected to the module. Replace if failure.
	Reverse valve solenoid coil	Check the reverse valve solenoid coil. Replace the coil if short, open or damaged.
	Reverse valve	If the reverse valve is blocked, the heating mode will not perform. Replace the reverse valve after checking the reason.
Water drops from indoor unit	Water drainage failure	Check the drainage pipe and repair if failure.
	The indoor unit is incorrect installed	Correct the installation if not correct.
	Drainage pipe blocked	Correct it.
	The humidity in room is too high	It's normal if the humidity in the room is over 85%.
	Wiring failure	Check wiring. Correct if wrong wiring or loosen.
	Wire EMC	Check wiring. Correct if the commucication wire is not shielded wire or twisted with other wires.
Zero-crossing error	Outdoor PCB failure	Replace if the LED is not on.
Insufficient cooling or heating.	Outdoor transformer failure	Replace if failure.
	Indoor PCB failure	Replace the PCB if the photon coupling on indoor PCB is failure.
	Indoor PCB failure	Replace after checked failure.

8. Electronic Control Principle of Large Cooling Capacity Split Model A/C

8.1 Fan only mode

Fan speed is high/mid/low/ Auto

8.2 Cooling mode

The 4-way valve is closed at cooling mode.

The action of the compressor and the outdoor fan:

T: Room temp.

Ts: Setting temp.

	Condition	Compressor	Outdoor fan
Temp. up	T> Ts+1	On	On
	T<Ts+1	Off	Off
Temp. down	T> Ts	On	On
	T<Ts	Off	Off

Auto fan

	Condition(T=Indoor Temp.-Setting Temp.)	Indoor fan speed
Temp. up	T<1℃	Low
	1℃<T<4℃	Med.
	T>5℃	High
Temp. down	T> 4℃	High
	1℃<T<4℃	Med.
	T<1℃	Low

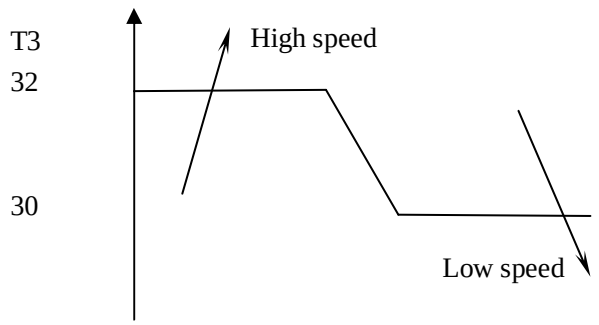
Anti-freezing control to indoor evaporator

	Condition		Compressor	Outdoor fan
	Temp.	Time		
Temp. up	T> TE6		On	On
	T< TE6	>4 Minutes	Off	Off
Temp. down	T> TE5		On	On
	T< TE5	>4 Minutes	Off	Off

Condenser high temp. protection(only for heat pump)

	Temp. Condition	Compressor
Temp. up	T> TE10	Off
	T< TE10	On
Temp. down	T> TE11	Off
	T< TE11	On

The outdoor fan motor speed control in the cooling mode.



8.3 Dehumidifying mode

8.3.1 Indoor fan speed at low speed.

8.3.2 Protection is same as cooling mode.

8.4 Heating mode

8.4.1 Generally, the 4-way valve is open in heating mode, but it is closed in defrosting mode.

8.4.2 Generally, the outdoor fan is turned off with the on-off action of compressor in heating mode, except for the defrosting mode or the end of defrost.

8.4.3 Action conditions of compressor at heating mode: compressor must run for 4 minutes after starting and then judge temperature. Meanwhile other protections are still valid.

	Condition	Compressor	Outdoor fan
Room temp. up	T> Ts+4	Off	Off
	T<Ts+4	On	On
Room temp. down	T< Ts+3	On	On
	T>Ts+3	Off	Off

8.4.4 Indoor Fan actions at heating mode

Indoor Fan can be set at HIGH/MID/LOW/AUTO by using a remote controller,

Anti-cold wind function 1.

	Condition T= Indoor exchanger temp.	Indoor fan speed
Indoor exchanger temp. up	T<TE1	Off
	TE1<T<TE2	Low speed
	T>TE2	Setting fan speed
Indoor exchanger temp. down	T>TE3	Setting fan speed
	TE4<T<TE3	Low speed
	T>TE4	Off

Anti- cold air protection 2 (when the room temp. satisfy the setting temp.)

	T=evaporator pipe sensor temp.	Indoor fan speed
Room temp. up	T<TE14+2℃	Low speed or stop
	T> TE14+2℃	Setting speed.
Room temp. down	T> TE14	Setting speed.
	T< TE14	Stop after 15 seconds Low speed

Auto wind

	Condition T=Indoor Temp.-Setting Temp.	Indoor fan speed
Room temp. up	T<2℃	Med. speed
	T>2℃	Low speed.
Room temp. down	T> 0℃	Low speed.
	T<0℃	Med. speed

Indoor evaporator high-temperature protection

	Condition T= Indoor exchanger temp.	Compressor	Outdoor fan
Indoor exchanger temp. up	T<TE15=54℃	On	On(high speed)
	TE15<T<TE8	On	On(low speed)
	TE8<T<TE7	On	Off
	T>TE7	Off	Off
Indoor exchanger temp. down	T>TE9	Off	Off
	T<TE9	On	On

8.5 Defrosting mode

8.5.1 Conditions of defrost:

Defrosting starts when either of the following :

T3 lower than 0°c, lasts for more than 40 minutes, provided that the time period when the temperature is lower than -3°c consecutively reaches 3 minutes.

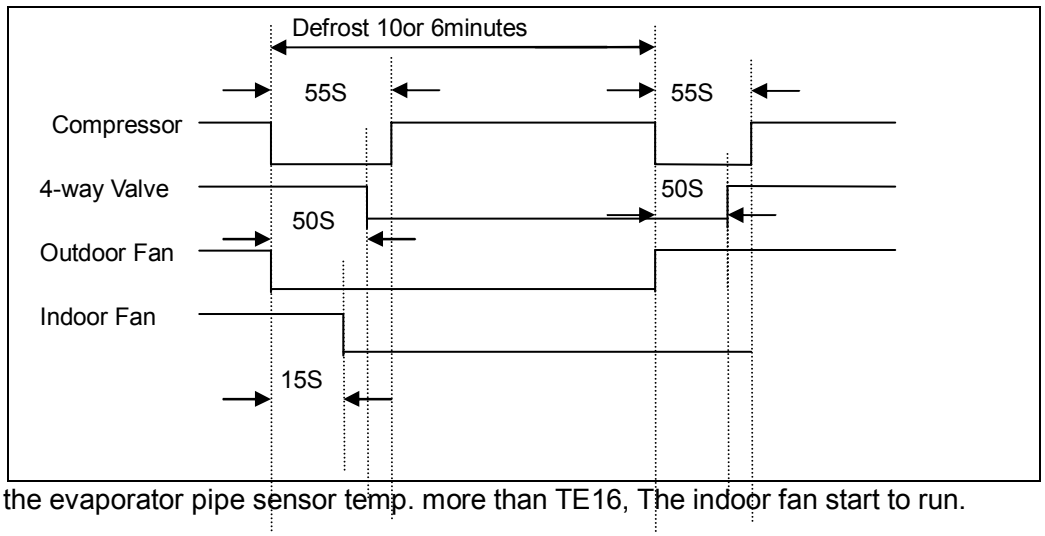
Calculate from the end of latest defrost, evaporator high temp. protection only closes outdoor fan with

the compressor still running. Add up to 90 minutes

.

8.5.2 Conditions of defrost ending:
Defrosting ends when either of the following :
The time gets to 10 minutes;
T3>20°c

8.5.3 Time sequence of the whole defrosting procedure is as follows:



Remark: when the evaporator pipe sensor temp. more than TE16, The indoor fan start to run.

8.6 Auto mode

8.6.1 When running in automatic mode, the air conditioner automatically selects one of the following operation modes: cooling, heating or ventilation according to the difference between room temp. (TA) and set temp. (TS).

TA—TS	Operation mode
TA—TS>2℃	Cooling
-1℃≤TA—TS≤+2℃	Air-only
TA—TS<-1℃	Heating (air-only for cooling only type)

8.6.2 At auto mode, the indoor fan blows automatically in selected mode.

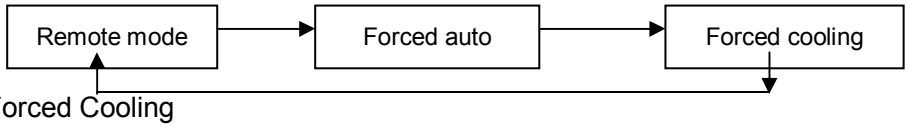
8.6.3 One mode should be carried out for at least 15 minutes once selected. If the compressor cannot start for 15 minutes, reselect the operation mode according to the room temp. and set temp., or reselect when the setting temp. changed

8.7 Economic mode

Cooling: The set temperature rise 1℃ per hour. Two hours later, the set temperature will maintain as a constant and the air circulation is kept at low speed,and the air condition will stop work after 7 hours.
Heating: The set temperature decrease 1℃ per hour. Two hours later, the set temperature will maintain as a constant and the air circulation is kept at low speed, and the air condition will stop work after 7 hours. (Cold air proof function takes priority over all).

8.8 Manual operation

Manual operation is controlled by touching buttons and divided into force cooling and forced auto mode. It transfers between these two modes by pressing the buttons, the cycling order of the button press is:



8.8.1 Forced Cooling

8.8.1.1 In forced cooling mode, the remote signal is not accepted.

8.8.1.2 The compressor is unconditionally turned on, after 30 minutes cooling operation whose fan mode is set as low, the A/C operates in the forced auto mode under the requirements of the forced auto mode.

8.8.1.3 During the start-up and operation, all of the following protecting functions work:
3minutes start-up delay protection, overload protection, outdoor protection, evaporator
Protection against low temperature. If any of the protection functions, the comparative protecting action is executed.
The forced cooling mode is closed by one touch on the button, meanwhile the operation light is off, the buzzer buzzes lasts for 1 seconds, then A/C turns to be closedown status.

8.8.2. Forced Auto

8.8.2.1 Remote control signal can be received in forced auto mode. When receiving the signals, the forced auto mode will be canceled and the A/C changes to remote control status and performs operation as the signals indicates.

8.8.2.2 The system performs control according to the remote control auto mode with a set temperature of 24°c.

8.9 Timer

24 hours timer on or off.

8.10 Protecting Function

8.10.1 Compress with a delay of 3 minutes.

8.10.2 Sensor open and break protection

8.10.3 EEPROM error protection.

8.10.4 Current protection function.

	Condition	Indoor fan	Compressor	Outdoor fan	Remark
Current up	$I < I_{RESTORE}$	On	On	On	
	$I_{RESTORE} < I < I_{FAN}$	On	On	Off	Heating mode
		Low speed	On	On	Cooling mode
	$I_{FAN} < I < I_{5MIN}$		Off	Off	After 5 Minutes
	$I_{5MIN} < I < I_{3SEC}$		Off	Off	After 3 Seconds
Current down	$I_{5MIN} < I < I_{3SEC}$		Off	Off	After 3 Seconds
	$I_{FAN} < I < I_{5MIN}$		Off	Off	After 5 Minutes
	$I_{RESTORE} < I < I_{FAN}$	On	On	Off	Heating mode
		Low speed	On	On	Cooling mode
	$I < I_{RESTORE}$	On	On	On	

8.11 Auto restart Function

In case of a sudden power failure, this function automatically sets the unit to previous settings before the power failure when power returns.

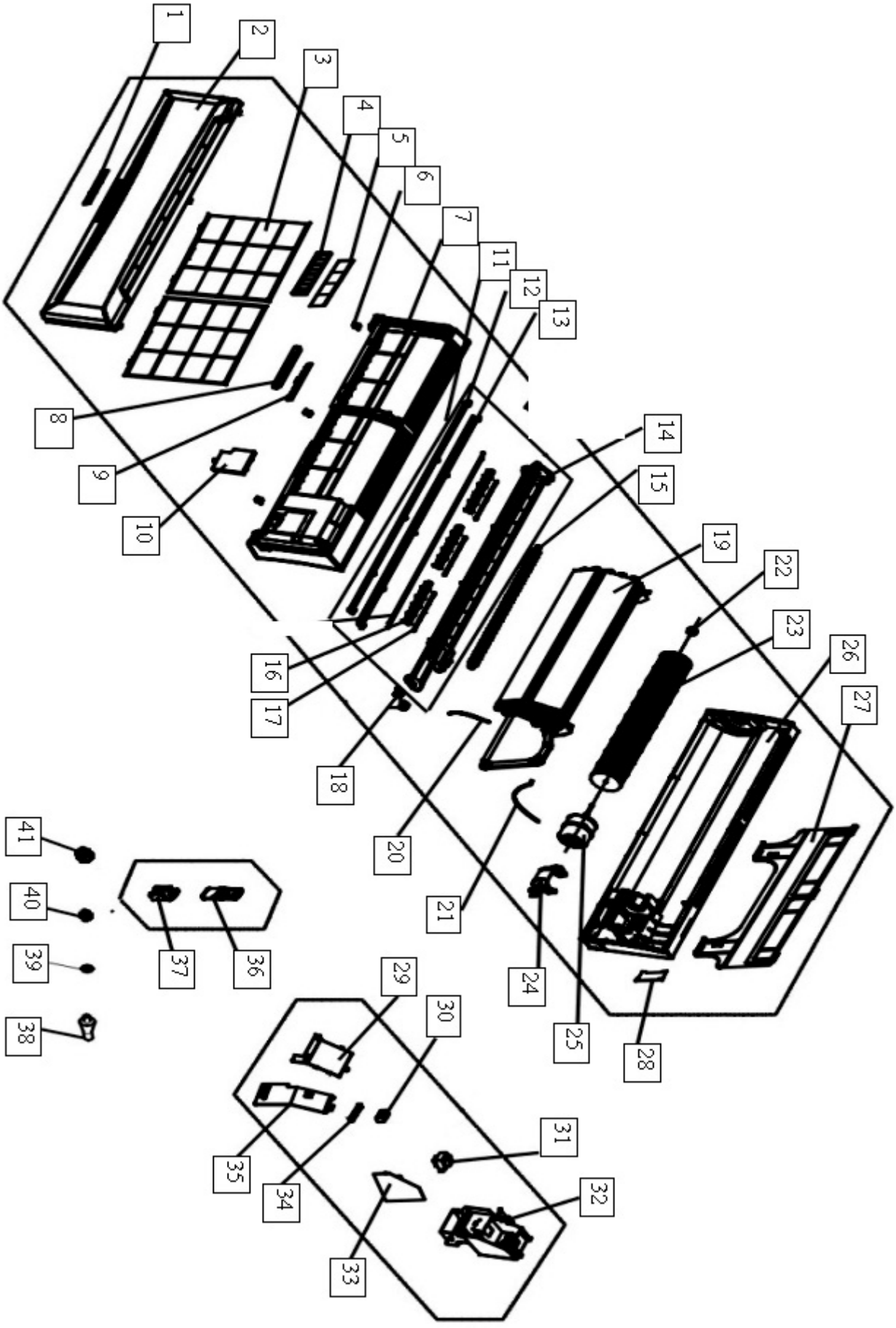
Models and Parameters

Model	DSA-241L
I3SEC	14A
I5MIN	20A
IFAN	22A
IRESTORE	
IDEFROST	
TE1	
TE2	
TE3	
TE4	
TE5	2°C
TE6	12°C
TE7	
TE8	
TE9	
ANGLCOOL	67
ANGLHEAT	
ANGLOFF	130
THDEFROST	
TMDEFROST	
TLDEFROST	

9. Characteristic of temp. sensor

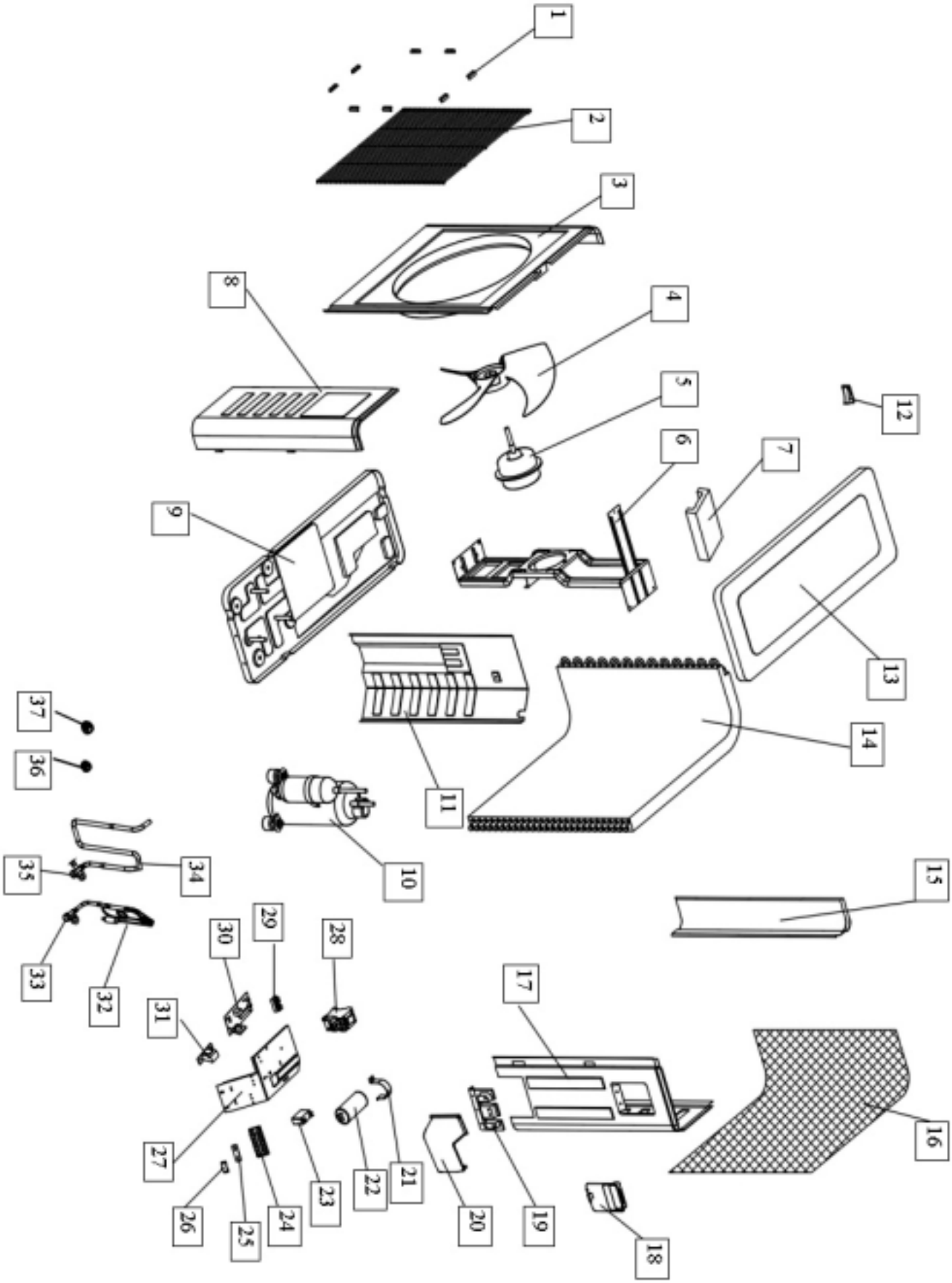
Temp.℃	Resistance KΩ		Temp.℃	Resistance KΩ		Temp.℃	Resistance KΩ
-10	62.2756		17	14.6181		44	4.3874
-9	58.7079		18	13.918		45	4.2126
-8	56.3694		19	13.2631		46	4.0459
-7	52.2438		20	12.6431		47	3.8867
-6	49.3161		21	12.0561		48	3.7348
-5	46.5725		22	11.5		49	3.5896
-4	44		23	10.9731		50	3.451
-3	41.5878		24	10.4736		51	3.3185
-2	39.8239		25	10		52	3.1918
-1	37.1988		26	9.5507		53	3.0707
0	35.2024		27	9.1245		54	2.959
1	33.3269		28	8.7198		55	2.8442
2	31.5635		29	8.3357		56	2.7382
3	29.9058		30	7.9708		57	2.6368
4	28.3459		31	7.6241		58	2.5397
5	26.8778		32	7.2946		59	2.4468
6	25.4954		33	6.9814		60	2.3577
7	24.1932		34	6.6835		61	2.2725
8	22.5662		35	6.4002		62	2.1907
9	21.8094		36	6.1306		63	2.1124
10	20.7184		37	5.8736		64	2.0373
11	19.6891		38	5.6296		65	1.9653
12	18.7177		39	5.3969		66	1.8963
13	17.8005		40	5.1752		67	1.830
14	16.9341		41	4.9639		68	1.7665
15	16.1156		42	4.7625		69	1.7055
16	15.3418		43	4.5705		70	1.6469

Exploded View Parts for Model DSA-241L 220~240V, 60Hz: Indoor Unit



No	Name	Quanlity	Sale code	BOM code	Remark
1	Indicator for LED	1	13518111001	2113029215	
2	Panel Ass'y	1	13528111001	2113079316	
3	air filter	2	13528111002	2113079315	
4	Air cleaner	1	10109121226	2113010212	
5	Air cleaner holder	1	10109121225	2113010217	
6	Screw cap	3	13528111003	2113079313	
7	Panel frame assy	1	13528111004	2113079317	
8	display board holder	1	13518111007	2113029159	
9	display board assy	1	13518111008	2333029078	
10	Window cover for repairing	1	15021111006	2113079250	
11	Air out frame assy	1	13821111002	2113079320	
12	Horizontal louver, up	1	13528111006	2113079568	
13	Horizontal louver, down	1	13528111007	2113079569	
14	Air out frame	1	13528111010	2113079567	
15	Drain Hose	1	10118121223	2110109002	
16	Grille holder	3	10321121006	2113079145	
17	Vertical louver	15	13528111012	2113079570	
18	Louver motor	1	10105111047	2240020004	
19	evaporator	1	10924121003	2153079031	
20	Indoor temp sensor	1	15021111014	2243079040	
21	Evaporator temp sensor	1	10109121242	2243069051	
22	Bearing holder	1	10321111008	2273079001	
23	Cross flow fan, assy	1	10321111009	2110029010	
24	Fixing part for motor	1	10321111013	2113079045	
25	Fan motor	1	13521311001	2240040720	
26	Chassis	1	15021111015	2113079242	
27	Installation Plate	1	10321111011	2123079017	
28	Connecting pipe clamp	1	10321111015	2123079016	
29	Fan motor capacitor	1	50309121808	2240119015	
30	Wire joint, 5p	1	10124121203	2230145023	
31	Transformer	1	10118121232	2230099003	
32	E-Parts box	1	15021111016	2113079200	
33	Main control board	1	13821111005	2133079129	
	(including Program chip)	1	13407111026	2130073660	
34	Wire clamp for power cord	1	10121121234	2113070033	
35	Cover for E-parts box	1	15021111017	2113079249	
36	Remote Controller	1	11608111003	2335506565	
37	Holder, Remote Controller	1	10718121009	2113139022	
38	connector for watering	1	11609121003	2110102011	
39	seal	1	31009321021	2272009001	
40	Copper nut, TLM-B02	1	10909121013	2160032001	
41	Copper nut,TLM-D04	1	11324113804	2160032003	

Exploded View Parts for Model DSA-241L 220~240V, 60Hz : Outdoor Unit



No.	Part Name	Quantity	Sale code	BOM code	Remark
1	Clamp for front net	8	10112121801	2113511801	
2	Front net	1	10118121801	2124550017	
3	Front clapboard	1	10924121801	2124550030	
4	Propeller fan	1	10118121804	2114550002	
5	Fan Motor	1	13521311801	2240041637	
6	Holder for fan motor	1	10118121809	2124550020	
7	Foam over holder for motor	1	10118121807	2224550001	
8	Front right clapboard	1	10118121803	2124551101	
9	Chassis	1	10122113803	2124550022	
10	Compressor	1	10122123804	2140061720	PH360X3CS-3KUU1
11	Separating board	1	10118111806	2123530551	
12	Little Handle	1	10830121811	2115029006	
13	Cover	1	10118121827	2124550031	
14	Condenser	1	13521111801	2153549096	
15	Left clapboard	1	10924121808	2124550032	
16	Rear Net	1	10924121809	2114550004	
17	Rear right clapboard	1	10118113804	2123549024	
18	Big Handle	1	10118121817	2114550003	
19	Installation plate for valves	1	10118113805	2123500018	
20	Water collector	1	10118121832	2113529005	
21	Capacitor Clamp	1	10112121814	2120010002	
22	Compressor capacitor	1	10122123801	2240100805	
23	Fan motor capacitor	1	10109121819	2240110351	
24	Wire joint	1	11812113810	2230145021	
25	Washer for wire joint	1	10112121817	2113500004	
26	Clamp for wiring	1	10118121823	2124540027	
27	Installation board for E-parts	1	13821111803	2123549049	
28	Contactor	1	10121121806	2230085004	
29	Wire joint for multiplexer	1	10121121809	2230145035	
30	Main control board	1	13528111802	2133549001	
31	Transformer	1	11018121010	2230090080	
32	High Pressure Valve Ass'y	1	10124111815	2163549418	
33	Liquid pipe valve	1	10124121812	2160074223	
34	Low Pressure Valve Ass'y	1	10122113804	2163549312	
35	Low Pressure Valve	1	10124121814	2160072219	
36	Copper nut, TLM-B02	1	10909121013	2160032001	
37	Copper nut,TLM-D04	1	11324113804	2160032003	

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